

US-PAT-NO: 6260772

DOCUMENT-IDENTIFIER: US 6260772 B1

TITLE: Dispensing and rinsing gun

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Brief Summary Text - BSTX (10):

A preferred embodiment dispensing gun for dispensing water received from a water supply and for dispensing a product diluted in the dispensing gun with water received from the water supply includes a handle, a water inlet, a water outlet, and a hose receiving member. A hose member includes a first channel and a second channel. The hose receiving member is operatively connected to a first channel of a hose member, and the first channel is in fluid communication with the water inlet. An aspirator is operatively connected to the second channel of the hose member and is in fluid communication with the water outlet. The aspirator includes an outlet. A water supply supplies the gun with water via the first channel of the hose member, and a product supply supplies the gun with product via the second channel of the hose member, wherein the aspirator creates a use solution of product diluted with water for the water outlet. The use solution exits the outlet of the aspirator. A nozzle is operatively connected to the water outlet to dispense water from the water outlet. A first valve is in fluid communication with the water outlet and the nozzle, and a second valve is in fluid communication with the water outlet and the aspirator. The first valve controls the flow of water via the first channel and the second valve controls the flow of water via the first channel

through the aspirator.

The first valve allows water to flow from said water outlet through the nozzle, and the second valve allows water to flow from the water outlet into the aspirator and the use solution created therein to flow through the outlet of the aspirator.

Brief Summary Text - BSTX (11):

In another preferred embodiment, an apparatus for dispensing liquid diluent and a liquid concentrate diluted with diluent includes a dispenser having an inlet and an outlet. A hose member includes a first channel and a second channel. The first channel interconnects a liquid diluent source to the inlet, wherein liquid diluent flows from the liquid diluent source into the inlet and out of the outlet. An aspirator is operatively connected to the outlet via the second channel. The aspirator includes a liquid diluent inlet a liquid concentrate inlet, and a dilute solution outlet. A control device operatively connected to the aspirator controls the flow of liquid diluent from a source of liquid diluent to the liquid diluent inlet. A nozzle is operatively connected to the outlet for dispensing liquid diluent from the outlet. A first valve is in fluid communication with the outlet and the nozzle and controls the flow of liquid diluent out of the nozzle. A second valve is in fluid communication with the outlet and the aspirator and controls the flow of dilute solution out of the dilute solution outlet.

Brief Summary Text - BSTX (12):

In another preferred embodiment dispensing gun for dispensing water received from a water supply and for dispensing a product diluted in the dispensing gun with water received from the water supply, the dispensing

gun includes a handle, a water inlet, a water outlet, and a hose receiving member operatively connected to a first channel of a hose member. The first channel of the hose member is in fluid communication with the water inlet. An aspirator is in fluid communication with the water outlet, and the aspirator includes an outlet. A water supply supplies the dispensing gun with water via the first channel of the hose member. A product supply is in fluid communication with the aspirator, wherein the aspirator creates a use solution of product diluted with water from the water outlet, and the use solution exits the outlet of the aspirator. A first nozzle is operatively connected to the water outlet to dispense water from the water outlet; and a first valve is in fluid communication with the water outlet and the first nozzle, and a second valve is in fluid communication with the water outlet and the aspirator. The first valve controls the flow of water via the first channel and the second valve controls the flow of water via the first channel through the aspirator. The first valve allows water to flow from the water outlet through the first nozzle and the second valve allows water to flow from the water outlet into the aspirator and the use solution created therein to flow through the outlet of the aspirator.

Detailed Description Text - DETX (10):

Aspirators 148a and 148b commonly known in the art are inserted into first bore 126 and third bore 128, respectively, and a pistol nozzle 113 including a first segment 107 and a second segment 114 commonly known in the art is inserted into second bore 127. Aspirators 148a and 148b include a first end 150a and 150b having bores 151a and 151b that are in fluid

communication with first tube 123 and third tube 125, respectively. Inlet port 149a is connected to first channel and inlet port 149b is connected to the third channel of the hose member to provide product to aspirators 148a and 148b. At the opposite end of aspirators 148a and 148b are rings 152a and 152b and bores 153a and 153b. Bore 153a is in fluid communication with third tube 171 and bore 153b is in fluid communication with first tube 169. Therefore, aspirator 148a is in fluid communication with first cavity 172 and aspirator 148b is in fluid communication with third cavity 174.

Detailed Description Text - DETX (18):

Railing 211 is operatively connected to base 201 proximate the center of base 201 and extends upward to provide support for reel support member 207. Hose reel 204 is operatively connected to railing 211 via reel support member 207 proximate the center of base 201 with nuts and bolts. Hose reel 204 and reel support member 207 are of the type generally known in the art. Hose 209 is operatively connected to hose reel 204, and an extension hose 209a connects hose 209 to hose fitting K. The tri-extruded supply hose 210 is then connected to the other end of the hose fitting K. The connection of these hoses is well known in the art. The weight of product containers 205 and 206 are counterweighted by the weight of hose reel 204 to balance the cart 200 evenly. Railing 211 also provides a surface on which a triangular shaped gun support 208 may be attached so that gun 100 may be stored on cart 200 when it is not in use. To store the gun 100, the dispensing nozzle portion of gun 100 is inserted into the center of gun support 208. To utilize the gun 100 attached to cart 200, all that is required is the connection of the

water hose 209 to a standard water faucet and the attachment of the product to the product containers. The dispensing and rinsing gun 100 is turned off when the selector 156 is positioned between the valves, as discussed above.

Claims Text - CLTX (4):

c. an aspirator operatively connected to said second channel of said hose member and in fluid communication with said water outlet, said aspirator having an outlet;

Claims Text - CLTX (5):

d. a product supply supplying said gun with product via said second channel of said hose member, wherein said aspirator creates a use solution of product diluted with water from said water outlet, said use solution exiting the outlet of the aspirator;

Claims Text - CLTX (7):

f. a first valve in fluid communication with said water outlet and said first nozzle and a second valve in fluid communication with said water outlet and said aspirator, said first valve controlling flow of water via said first channel and said second valve controlling flow of water via said first channel through said aspirator, wherein said first valve allows water to flow from said water outlet through said first nozzle, and wherein said second valve allows water to flow from said water outlet into said aspirator and said use solution created therein to flow through said outlet of said aspirator.

Claims Text - CLTX (13):

7. The dispensing gun of claim 1, further comprising a

third channel of  
said hose member, a second aspirator operatively connected  
to said third  
channel of said hose member and in fluid communication with  
said water outlet,  
said second aspirator having an outlet, a second product  
supply supplying said  
dispensing gun with a second product via said third channel  
of said hose member  
wherein said second aspirator creates a use solution of  
second product diluted  
with water from said water outlet, a third valve  
interconnecting said water  
outlet and said second aspirator for controlling water via  
said first channel  
and product via said third channel, said use solution is  
dispensed from said  
outlet of said second aspirator, wherein said third valve  
allows water to flow  
from said water outlet into said second aspirator and said  
use solution created  
therein to flow through said outlet of said second  
aspirator.

Claims Text - CLTX (17):

c. an aspirator operatively connected to said outlet via  
said second  
channel, said aspirator having a liquid diluent inlet, a  
liquid concentrate  
inlet, and a dilute solution outlet;

Claims Text - CLTX (18):

d. a control device operatively connected to the  
aspirator for controlling  
flow of liquid diluent from a source of liquid diluent to  
the liquid diluent  
inlet;

Claims Text - CLTX (21):

g. a second valve in fluid communication with said  
outlet and said aspirator  
for controlling flow of dilute solution through the dilute  
solution outlet.

Claims Text - CLTX (26):

13. The apparatus of claim 8, further comprising a third channel of said hose member, a second aspirator operatively connected to said third channel of said hose member and in fluid communication with said outlet, said second aspirator having a dilute solution outlet, a second liquid concentrate connected to said third channel of said hose member wherein said second aspirator creates a use solution of second liquid concentrate diluted with liquid diluent from said outlet, a third valve in fluid communication with said outlet and said second aspirator for controlling the flow of liquid diluent via said first channel and liquid concentrate via said third channel, wherein said third valve allows liquid diluent to flow from said outlet into said second aspirator and said dilute solution created therein to flow through said dilute solution outlet.

Claims Text - CLTX (30):

c. an aspirator in fluid communication with said water outlet, said aspirator having an outlet,

Claims Text - CLTX (31):

d. a product supply in fluid communication with said aspirator, wherein said aspirator creates a use solution of product diluted with water from said water outlet, said use solution exiting the outlet of the aspirator;

Claims Text - CLTX (33):

f. a first valve in fluid communication with said water outlet and said first nozzle and a second valve in fluid communication with said water outlet

and said aspirator, said first valve controlling flow of water via said first channel and said second valve controlling flow of water via said first channel through said aspirator, wherein said first valve allows water to flow from said water outlet through said first nozzle, and wherein said second valve allows water to flow from said water outlet into said aspirator and said use solution created therein to flow through said outlet of said aspirator.

Claims Text - CLTX (34):

15. The dispensing gun of claim 14, wherein said hose member has a second channel to place said product supply in fluid communication with said aspirator.

Claims Text - CLTX (35):

16. The dispensing gun of claim 14, further comprising a third valve and a second product supply in fluid communication with a second aspirator, said second aspirator being in fluid communication with said water outlet and having an outlet, wherein said second aspirator creates a use solution of said second product supply diluted with water from said water outlet, said third valve interconnecting said water outlet and said second aspirator for controlling water via said first channel and second product, said use solution is dispensed from said outlet of said second aspirator, wherein said third valve allows water to flow from said water outlet into said second aspirator and said use solution created therein to flow through said outlet of said second aspirator.

Current US Original Classification - CCOR (1):

239/310